

ABSTRACT

A map of site-specific amounts of a soil nutrient, to be applied in fertilizer to an
5 agricultural field is created using a map of site-specific amounts of the soil nutrient needed to
produce the maximum possible yield at the particular site. Subtracted from the site-specific
amounts of nutrient needed are site-specific amounts of the nutrient currently existing in the
field, thus producing the map of site-specific nutrient amounts to be added. The nutrient
amounts may be added to the soil using the map and conventional variable-rate fertilizer
10 application methods. In one embodiment, the amounts of the soil nutrient needed to produce
the maximum possible yield at each site is created using a map of site-specific measures of
biomass produced by the field in a past growing season or seasons, which in turn is created
from a remotely sensed biomass image.

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